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L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1999:608939 CAPLUS
DN 132:133968
TI Inhibitory effect of Eucalyptus globulus on collagenase type I (MMP-1)
AU Kyotani, Daiki; Obayashi, Kei; Okano, Yuri; Masaki, Hitoshi
CS Fundamental Research Laboratory, Noevir Co. Ltd., Yokaichi, 527-8588, Japan
SO Nippon Koshohin Kagakkaishi (1999), 23(2), 83-86
CODEN: NKKAEV; ISSN: 0287-1238
PB Nippon Koshohin Kagakkai
DT Journal
LA Japanese
CC 7-3 (Enzymes)
Section cross-reference(s): 62
AB The long term UV irradn. leads to photoaging which is characterized by deep wrinkle and sagging of the skin. Many researchers propose that the formations of wrinkle and sagging by photoaging is due to the alternation of the structure in the dermal matrix. The dermis is maintained by the balance of synthesis and degrdn. of dermal matrix such as collagen, elastin, and glycosaminoglycans. In photoaging skin, it is reported that the degrdn. of matrix is stimulated and their synthesis is reduced. Therefore, to prevent or improve the photoaging skin, it will be required to modulate the balance. Then, we noticed the approach of collagenase inhibition for the modulation. We had investigated plant exts. having the inhibitory effect for collagenase, and reported that a 50% ethanol ext. of Eucalyptus globulus inhibits collagenase activity. In this study, we tried to fractionate the Eucalyptus ext. to obtain the higher inhibitory effect and to study the active substance. As a result, we could fractionate an active substance with higher inhibitory effect. And, with the examn. by TLC and UV-Vis spectra, it was found that the active substance was polyphenol compds. with chelating effect.
ST Eucalyptus polyphenol inhibition type 1 collagenase; matrix metalloproteinase 1 inhibition Eucalyptus polyphenol skin antiaging
IT Eucalyptus globulus
(inhibitory effect of Eucalyptus globulus on collagenase type I (MMP-1))
IT Skin, disease
(photoaging, possible anti-aging application of Eucalyptus globulus polyphenols; inhibitory effect of Eucalyptus globulus on collagenase type I (MMP-1))
IT Phenols, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyphenols, nonpolymeric; inhibitory effect of Eucalyptus globulus on collagenase type I (MMP-1))
IT 99-50-3, Protocatechuic acid 117-39-5, **Quercetin** 149-91-7, Gallic acid, biological studies 476-66-4, Ellagic acid
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(inhibitory effect of Eucalyptus globulus on **collagenase** type I (MMP-1))
IT 9001-12-1, MMP-1
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(type 1; inhibitory effect of Eucalyptus globulus on collagenase type I (MMP-1))

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L4 ANSWER 42 OF 45 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1996:14268 CAPLUS
DN 124:83157
TI Collagen and collagenase gene expression in three-dimensional collagen lattices are differentially regulated by .alpha.1.beta.1 and .alpha.2.beta.1 integrins
AU Langholz, Oliver; Rockel, Dagmar; Mauch, Cornelia; Kozlowska, Ewa; Bank, Ilan; Krieg, Thomas; Eckes, Beate
CS Dep. of Dermatology, Univ. of Cologne, Cologne, Germany
SO Journal of Cell Biology (1995), 131(6, Pt. 2), 1903-15
CODEN: JCLBA3; ISSN: 0021-9525
PB Rockefeller University Press
DT Journal
LA English
CC 13-6 (Mammalian Biochemistry)
AB The reorganization of extracellular matrix (ECM) is an important function in many biol. and pathophysiol. processes. Culture of fibroblasts in a three-dimensional collagenous environment represents a suitable system to study the underlying mechanisms resulting from cell-ECM interaction, which leads to reprogramming of fibroblast biosynthetic capacity. The aim of this study was to identify receptors that transduce ECM signals into cellular events, resulting in reprogramming of connective tissue metab. Data demonstrate that in human skin fibroblasts .alpha.1.beta.1 and .alpha.2.beta.1 integrins are the major receptors responsible for regulating ECM remodeling: .alpha.1.beta.1 mediates the signals inducing down-regulation of collagen gene expression, whereas the .alpha.2.beta.1 integrin mediates induction of collagenase (MMP-1). Applying mAb directed against different integrin subunits resulted in triggering the heterodimeric receptors and enhancing the normal biochem. response to receptor ligation. Different signal transduction inhibitors were tested for their influence on gel contraction, expression of .alpha.1(I) collagen and MMP-1 in fibroblasts within collagen gels. Ortho-vanadate and herbimycin A displayed no significant effect on any of these three processes. In contrast, **genistein** reduced lattice contraction, and completely inhibited induction of **MMP**-1, whereas type I collagen down-regulation was unaltered. Calphostin C inhibited only lattice contraction. Taken together, these data indicate a role of tyrosine-specific protein kinases in mediating gel contraction and induction of MMP-1, as well as an involvement of protein kinase C in the contraction process. The data indicate that different signaling pathways exist leading to the three events discussed, and that these pathways do not per se depend upon each other.
ST integrin collagen collagenase gene expression fibroblast
IT Fibroblast
Signal transduction, biological
(collagen and collagenase gene expression in three-dimensional collagen lattices are differentially regulated by .alpha.1.beta.1 and .alpha.2.beta.1 integrins)
IT Collagens, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(collagen and collagenase gene expression in three-dimensional collagen lattices are differentially regulated by .alpha.1.beta.1 and .alpha.2.beta.1 integrins)
IT Integrins
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(.alpha.1.beta.1, collagen and collagenase gene expression in three-dimensional collagen lattices are differentially regulated by .alpha.1.beta.1 and .alpha.2.beta.1 integrins)
IT Integrins
RL: BAC (Biological activity or effector, except adverse); BPR (Biological

process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(.alpha.2.beta.1, collagen and collagenase gene expression in three-dimensional collagen lattices are differentially regulated by .alpha.1.beta.1 and .alpha.2.beta.1 integrins)

IT 9001-12-1, Matrix metalloproteinase1- 80449-02-1, Tyrosine-protein kinase 141436-78-4, Protein kinase C
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(collagen and collagenase gene expression in three-dimensional collagen lattices are differentially regulated by .alpha.1.beta.1 and .alpha.2.beta.1 integrins)